CITY OF ROCHESTER

OLMSTED COUNTY, MINNESOTA

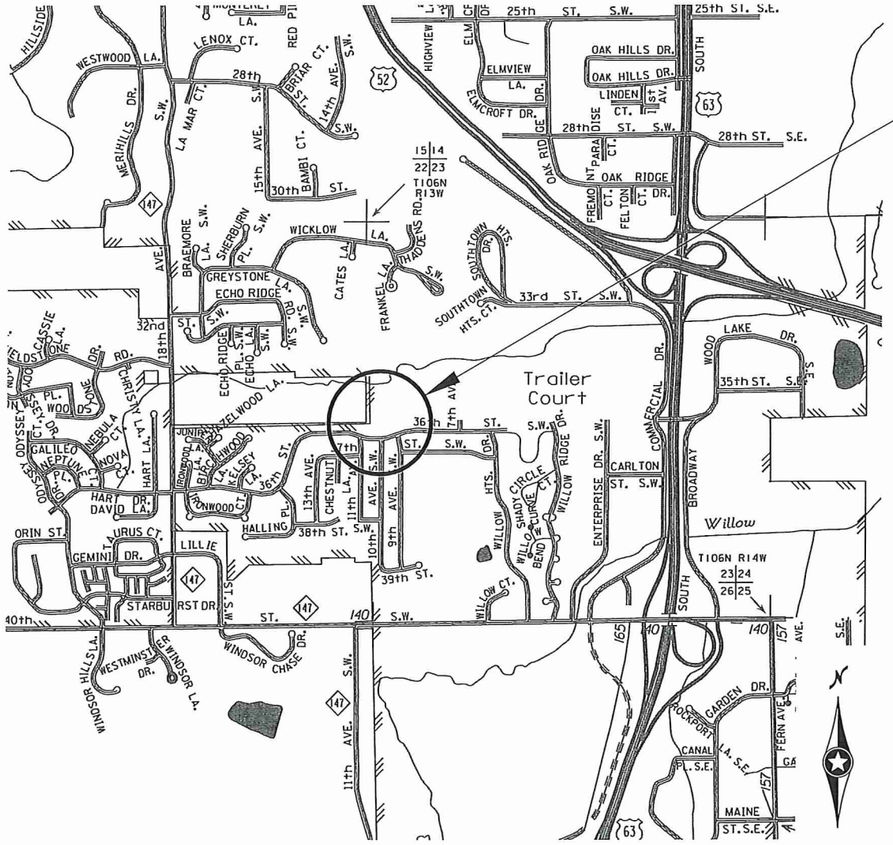
PLANS FOR:

WILLOW HILLS POND RENOVATION

GRADING, STORM SEWER RESTORATION & POND REHABILITATION

PLAN SYMBOLS - EXISTING

- RIGHT-OF-WAY LINE
- PROPERTY LINE
- EXISTING CONTOUR
- CONC. CURB AND GUTTER
- CONC. RETAINING WALL
- LANDSCAPING FEATURE
- TREE LINE
- DECIDUOUS TREE
- MAIL BOX (MB)
- MANMADE STRUCTURE
- GAS MAIN (-G——G-)
- OVERHEAD POWER (—OHP——OHP—)
- POWER POLE LINE
- BURIED FIBER OPTIC CABLE (—F/O-BUR—)
- FIRE HYDRANT
- STREET LIGHT
- SEWER, (SANITARY)
- SEWER MANHOLE



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO GUIDELINES OF CI//ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION", SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

CITY OF ROCHESTER STANDARD SPECIFICATION FOR UTILITY AND STREET CONSTRUCTION.

INDEX

SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
2	CONSTRUCTION/SOILS NOTES
3	EXISTING CONDITIONS & REMOVALS PLAN
4	GRADING AND EROSION CONTROL PLAN
5	CONSTRUCTION PLAN & PROFILE
6	LANDSCAPING AND TURF ESTABLISHMENT PLAN
7–8	MISCELLANEOUS DETAILS
9–11	LANDSCAPING DETAILS

THIS PLAN CONTAINS 11 SHEETS

SRF Consulting Group, Inc.

ENGINEERS
PLANNERS
DESIGNERS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE Eric Reorish

DATE 6/19/2015 LIC. NO. 45645 PRINT NAME ERIC REORISH

RECOMMENDED FOR APPROVAL _____ 20
PUBLIC WORKS DIRECTOR

RECOMMENDED FOR APPROVAL _____ 20
MANAGER OF ENGINEERING

RECOMMENDED FOR APPROVAL _____ 20
PROJECT MANAGER

CITY PROJECT NO. SWM-8-11
J NO. 6620

THIS PLAN AND/OR SPECIFICATION WAS PREPARED SPECIFICALLY FOR THIS PROJECT, AND ANY RE-USE OF DETAILS OR SPECIFICATIONS ON OTHER PROJECTS IS NOT INTENDED OR AUTHORIZED BY THE DESIGNER. LIABILITY FOR ANY RE-USE ON OTHER PROJECTS IS THE RESPONSIBILITY OF THE PERSON, AGENCY, OR CORPORATION USING PLAN OR SPECIFICATION DATA FROM THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO GUIDELINES OF CI/ASCE 38-02. ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

dsimon
June 19, 2015 - 8:31:54AM
H:\Projects\198\CAD\BIM\Plan\30 scale 11x17\8198_tsh01.dwg TITLE SHEET

GRADING, BASE AND SURFACE

1. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

2. STRIP TOPSOIL FROM AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. LIMITS OF EXISTING TOPSOIL UNKNOWN.

3. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.

4. CONTRACTOR SHALL REFER TO THE SOILS REPORT FOUND IN THE SPECIFICATIONS. FOR INFORMATION ONLY.

5. COMPACTION OF THE GRADING AND AGGREGATE ITEMS SHALL BE BY THE "QUALITY COMPACTION" METHOD.

6. COMPACTION OF UTILITY TRENCHES SHALL BE AS STATED IN THE PROJECT SPECIFICATIONS.

7. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION DEPICTED ON THE CROSS SECTION SHEETS.

8. IF GROUND WATER IS PRESENT IN THE EXCAVATION, OR IF THE EXPOSED SOILS ARE WET AND UNSTABLE, CONTACT THE OWNER OR ENGINEER FOR A RECOMMENDATION FROM THE GEOTECHNICAL ENGINEER.

9. CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION CONTROL MEASURES PRIOR TO COMMENCING GRADING ACTIVITIES AND SHALL MAINTAIN SAID MEASURES FOR DURATION OF CONSTRUCTION ACTIVITIES. UPON ESTABLISHMENT OF TURF, THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF OFF SITE.

10. CONTRACTOR TO PREVENT DIRT AND/OR DEBRIS FROM ENTERING STORM SEWER OR BEING TRANSPORTED OFF SITE IN AN UNCONTROLLED MANOR. CONTRACTOR TO VERIFY AT PROJECT CLOSEOUT THAT THE PROPOSED STORM SEWER IS CLEAR OF SEDIMENT AND/OR DEBRIS AND IS FULLY FUNCTIONAL.

11. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS AND/OR EVERY 7 DAYS.

12. ALL DISTURBED NON-PAVED AREAS SHALL RECEIVE TEMPORARY PROTECTION OR PERMANENT COVER WITHIN 7 DAYS OF COMPLETION OF GRADING OR DISTURBANCE OPERATIONS IN THOSE AREAS.

13. WHEN TRAPPED SEDIMENT REACHES 1/3 OF THE HEIGHT OF SILT FENCE, IT SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

14. WHEN SEDIMENT IS TRACKED ON TO PAVED SURFACES, IT SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY.

15. ANY SEDIMENT FROM THE CONSTRUCTION SITE THAT ACCUMULATES ON OR OFF THE OWNER'S PROPERTY SHALL BE REMOVED BY THE CONTRACTOR AT HIS/HER EXPENSE. ANY DAMAGE THAT OCCURS FROM THE ACCUMULATED SEDIMENT OR FROM THE CONTRACTOR'S REMOVAL OF THE SEDIMENT, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE.

16. THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF THE PROJECT SPECIFIC EROSION CONTROL PLAN.

REMOVALS

17. PROVIDE FOR THE REMOVAL AND DISPOSAL OF ANY INPLACE SURFACING, EXCESS COMMON EXCAVATION, OTHER STRUCTURES OR DEBRIS THAT WOULD INTERFERE WITH CONSTRUCTION. ALL SUCH MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED TO THE EXTENT ALLOWED OR DISPOSED OF OFF THE OWNER'S PROPERTY IN ACCORDANCE WITH SPEC. 2104.3.03 PROVIDE FOR SAWCUTTING AS DEEMED NECESSARY BY THE ENGINEER.

18. ANY ITEMS OR SURFACES INTENDED TO REMAIN AND DAMAGED BY THE CONTRACTOR, MUST BE REPAIRED OR REPLACED TO ORIGINAL OR BETTER CONDITION AS APPROVED BY THE OWNER. ALL COSTS ASSOCIATED WITH THE REPAIR OR REPLACEMENT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

REMOVALS CONT.

20. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL UTILITY LOCATES.

21. CONTRACTOR SHALL PROVIDE TRAFFIC AND PEDESTRIAN CONTROL DURING THE CONSTRUCTION PERIOD TO THE SATISFACTION OF THE OWNER AND ENGINEER.

22. ALL PAVEMENT JOINTS SHALL BE SAWCUT FOR REMOVAL.

TURF ESTABLISHMENT

23. PLACE A MINIMUM OF 6 INCHES OF TOPSOIL ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT LOCATED OUTSIDE OF THE INFILTRATION ZONE. DEBRIS AND LARGE ROCKS SHALL BE REMOVED FROM SLOPE DRESSING GENERATED ON-SITE PRIOR TO PLACEMENT FOR PERMANENT TURF ESTABLISHMENT. SLOPE DRESSING SHALL BE PROPERLY PREPARED TO PROVIDE A UNIFORM AND SUITABLE BED PRIOR TO SEEDING, ACCORDING TO MNDOT SPECIFICATIONS.

24. SOD AREAS ADJACENT TO RESIDENCES, AS INDICATED IN THE TURF ESTABLISHMENT AND RESTORATION PLAN.

UTILITIES

25. COMPLY WITH ALL LOCAL AND STATE REQUIREMENTS FOR UTILITY INSTALLATION AND TESTING.

26. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P, "EXCAVATIONS AND TRENCHES." THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

27. TIE ALL PIPE JOINTS FROM APRON TO MANHOLE.

MISCELLANEOUS

28. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

29. THE CONTRACTOR IS HEREBY REMINDED OF HIS/HER RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL (PRIOR TO ANY EXCAVATION).

30. WHENEVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.

31. CONTRACTOR TO MEET WITH HOME OWNERS TO MARK LOCATIONS OF SPRINKLER SYSTEM AND TO PROTECT OR MOVE SPRINKLERS AS NEEDED (INCIDENTAL).

32. CASTING ON EXISTING STRUCTURE 100 SHALL BE SALVAGED AND INSTALLED ON PROPOSED STRUCTURE 100.

CITY OF ROCHESTER STANDARD PLATES

THE FOLLOWING CITY OF ROCHESTER STANDARD PLATES ARE REFERENCED IN THE PLANS:

PLATE NO.	DESCRIPTION
1-04	STRUCTURE TYPE 4
1-11	CASTING REFERENCE NUMBERS
1-12	STANDARD CASTING ASSEMBLIES
1-13	CONCRETE STRUCTURE ADJUSTING RINGS
2-01	CONCRETE CURB AND GUTTER
2-14	SIDEWALK DETAILS
3-01	TYPICAL SECTION ROADWAY
7-01	SILT FENCE
7-05	INLET PROTECTION
7-06	TEMPORARY ROCK CONSTRUCTION ENTRANCE

MNDOT STANDARD PLATES

THE FOLLOWING MNDOT STANDARD PLATES ARE REFERENCED IN THE PLANS:

PLATE NO.	DESCRIPTION
3000	REINFORCED CONCRETE PIPE
3006	GASKET JOINT FOR R.C. PIPE
3100	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133	RIPRAP AT RCP OUTLETS

NO	DATE	BY	CKD	APPR	

H:\PROJECTS\8198\CAD_BIM\PLAN\30 SCALE 11X17\8198_SCN01.DWG: CONSTRUCTION NOTES

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: ERIC ROERISH
Date 6/19/15 License # 45645

DRAWN BY S. HARDING
DESIGNED BY L. BREU
CHECKED BY E. ROERISH
COMM. NO.8198

SRF Consulting Group, Inc. ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA
CONSTRUCTION NOTES
WILLOW HILLS POND RENOVATION

SHEET 2 OF 11

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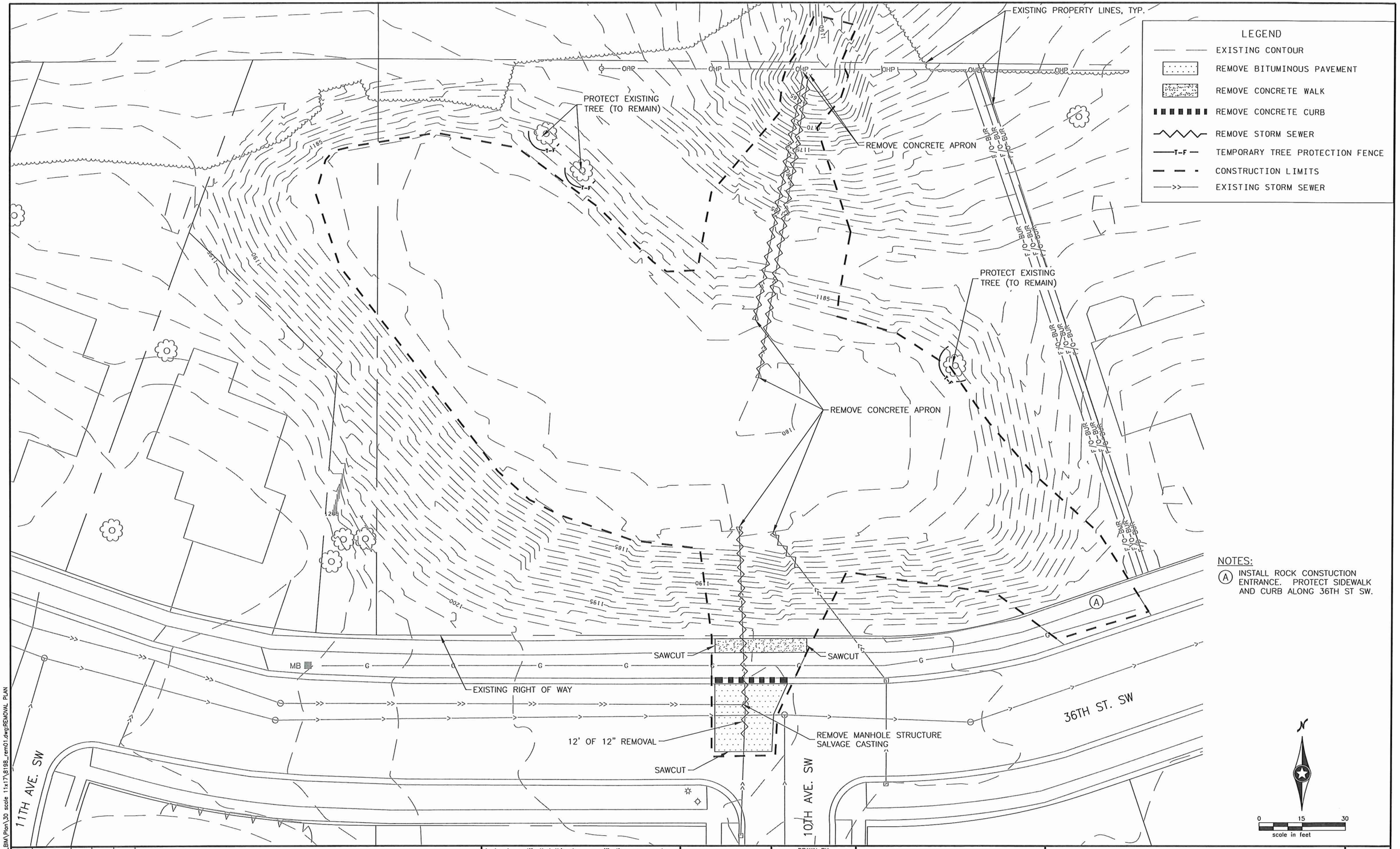

NOTES:

(A) INSTALL ROCK CONSTUCTION ENTRANCE. PROTECT SIDEWALK AND CURB ALONG 36TH ST SW.

NO	DATE	BY	CKD	APPR

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Print Name: ERIC ROERISH

Date 6/19/15 License # 45645

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DESIGNED BY L. BREU

CHECKED BY E. ROERISH

COMM. NO.8198

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ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA

EXISTING CONDITIONS AND REMOVALS PLAN

WILLOW HILLS POND RENOVATION

SHEET 3 OF 11

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H:\Projects\8198\CAD_BIM\Plan\30 scale 11x17\8198_rem01.dwgREMOVAL PLAN

TEMPORARY CHECK DAMS
SEE DETAIL 2/7
RIPRAP FROM CHECK DAMS TO BE USED TO LINE STILLING BASIN
STILLING BASIN
SEE DETAIL 5/8
EXISTING RIGHT OF WAY
ROCK WEEPER
SEE DETAIL 3/7
SEDIMENT BASIN
BOTTOM = 1174.5
NWL = 1178.5
FILTRATION BASIN BOTTOM = 1178.5
HWL = 1184.9
SEE DETAIL 1/7
MB
MAINTENANCE ACCESS @ 10:1
36TH ST. SW
EXISTING RIGHT OF WAY
107TH AVE. SW

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED DRAINTILE
- CONSTRUCTION LIMITS
- SILT FENCE
- RIPRAP (SEE DETAILS)
- Ⓡ RIPRAP AT APRON PER MNDOT STD. PLATE 3133
- INLET PROTECTION
- EROSION CONTROL BLANKET CATEGORY 4

GENERAL NOTES:

1 SILT FENCE LOCATION IS APPROXIMATE, FIELD VERIFY

N

0 15 30
scale in feet

NO	DATE	BY	CKD	APPR

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CITY OF ROCHESTER, MINNESOTA
GRADING AND EROSION CONTROL PLAN
WILLOW HILLS POND RENOVATION

SHEET 4 OF 11

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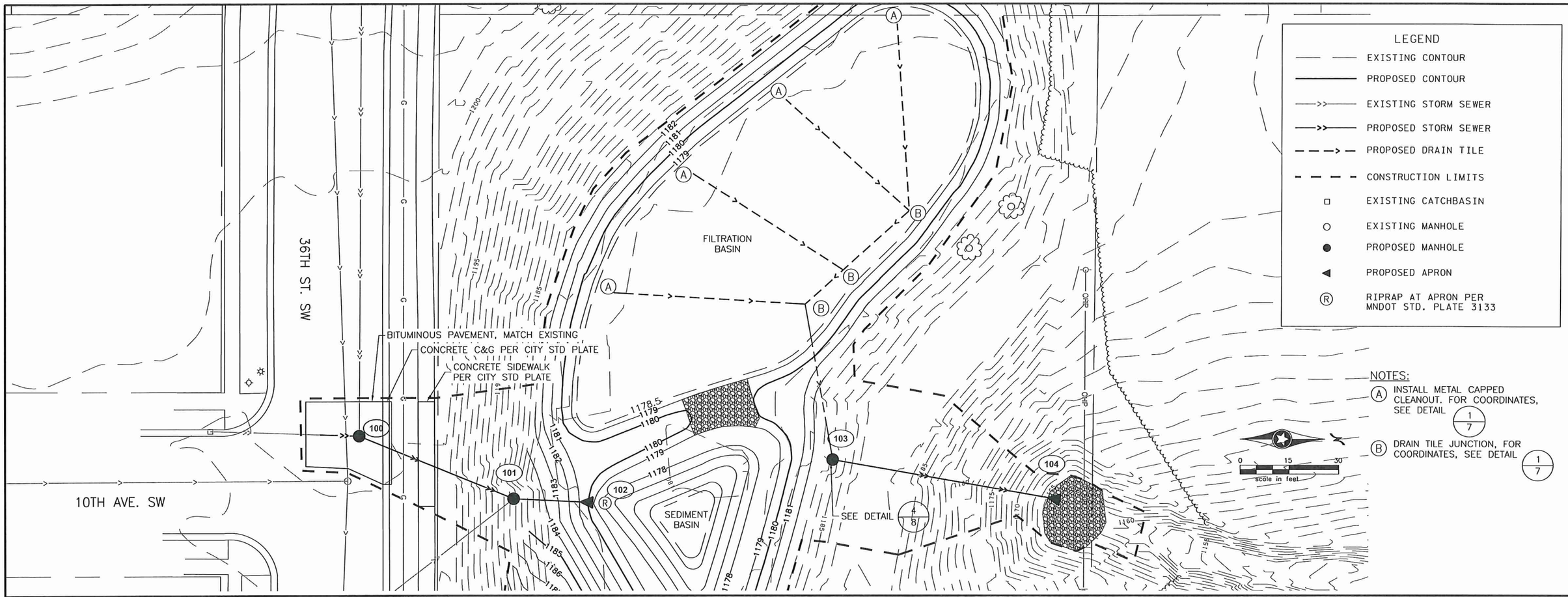

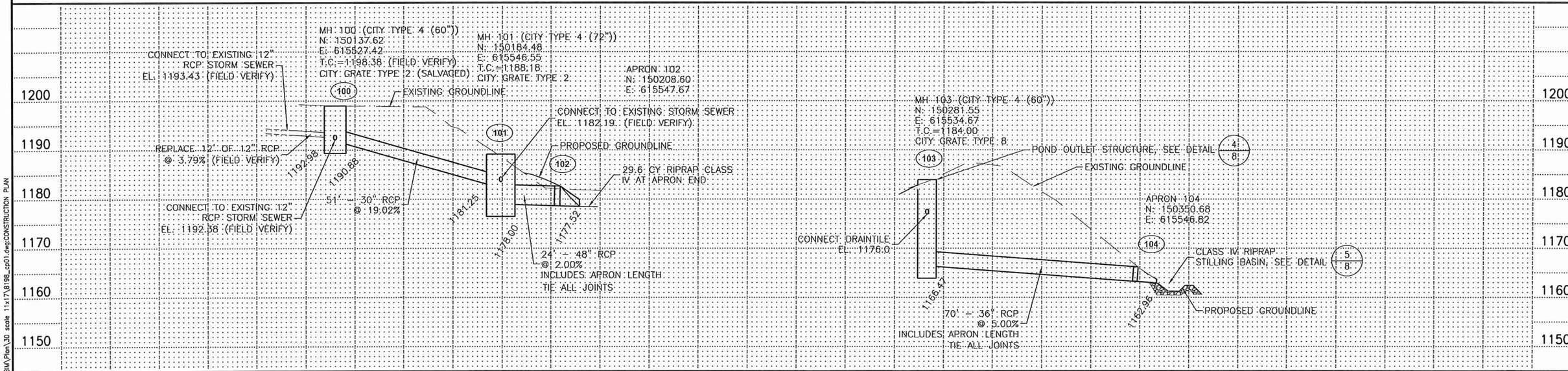

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Eric Roerish
Date 6/19/15 License # 45645

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CITY OF ROCHESTER, MINNESOTA
CONSTRUCTION PLAN AND PROFILE
WILLOW HILLS POND RENOVATION

SHEET 5 OF 11

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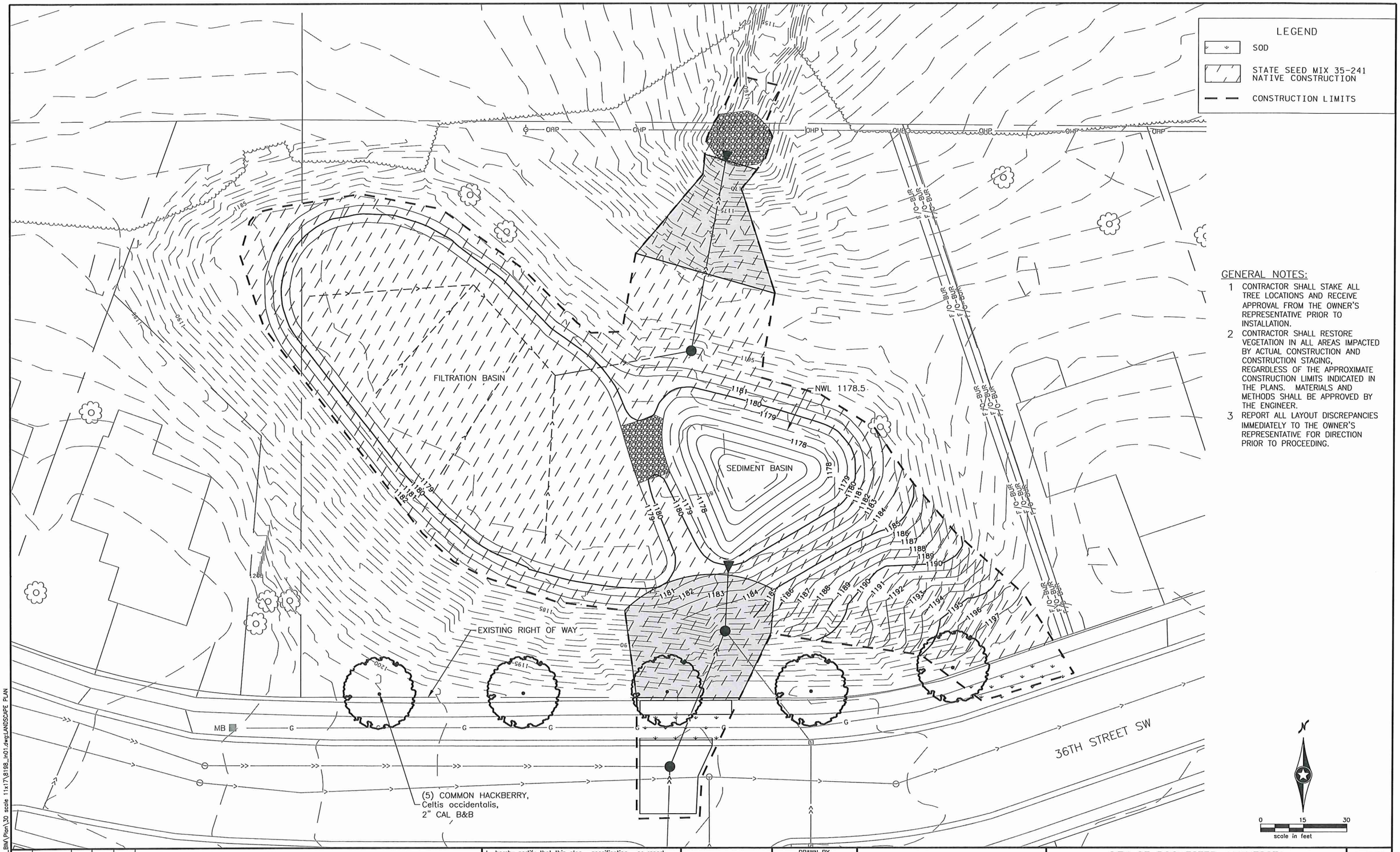
H:\Projects\8198\CAD_BIM\Plan\30 scale 11x17\8198_cp01.dwgCONSTRUCTION PLAN



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H:\PROJECTS\8198\CAD_BIM\PLAN\30 SCALE 11X17\8198_LN01.DWG: LANDSCAPE PLAN

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Eric Roerish

Date 6/19/15 License # 45645

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CITY OF ROCHESTER, MINNESOTA
LANDSCAPING AND TURF ESTABLISHMENT PLAN
WILLOW HILLS POND RENOVATION

SHEET 6 OF 11

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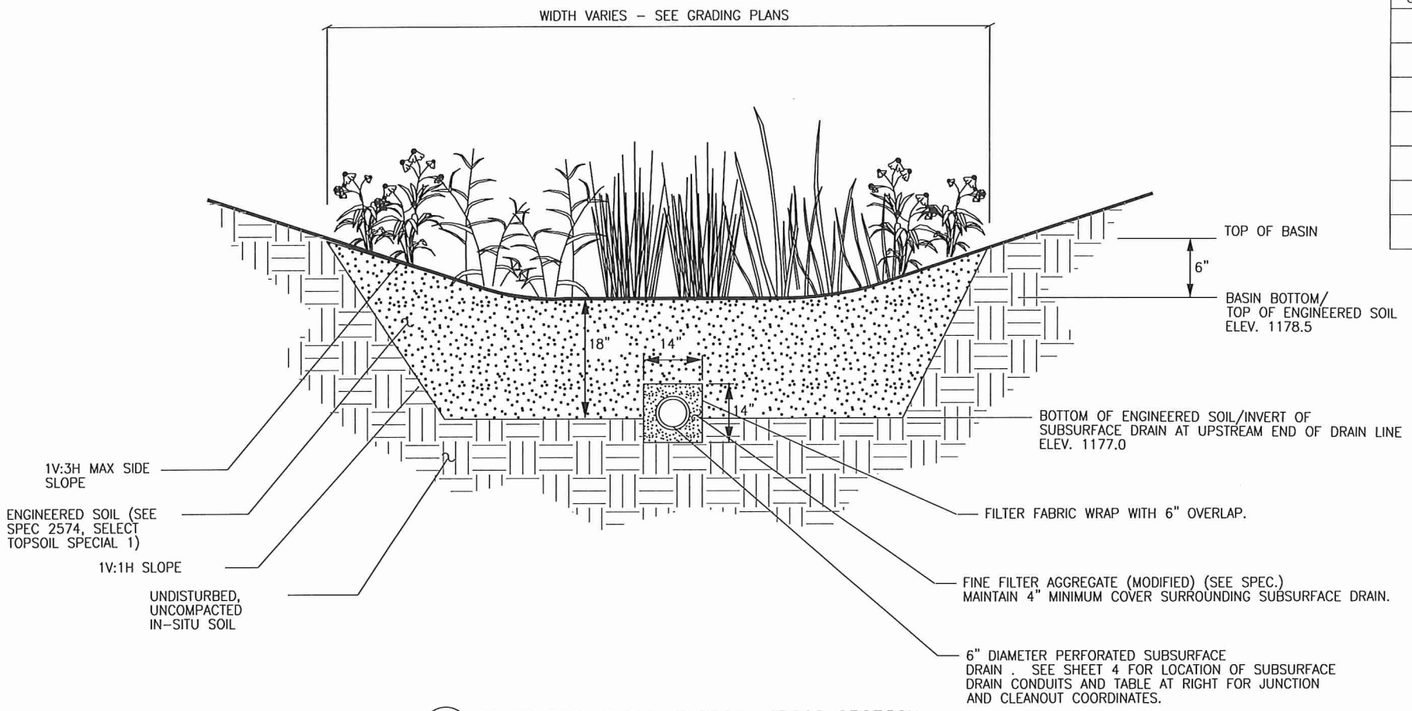
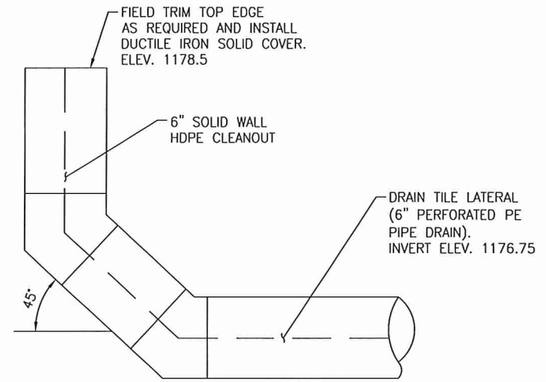
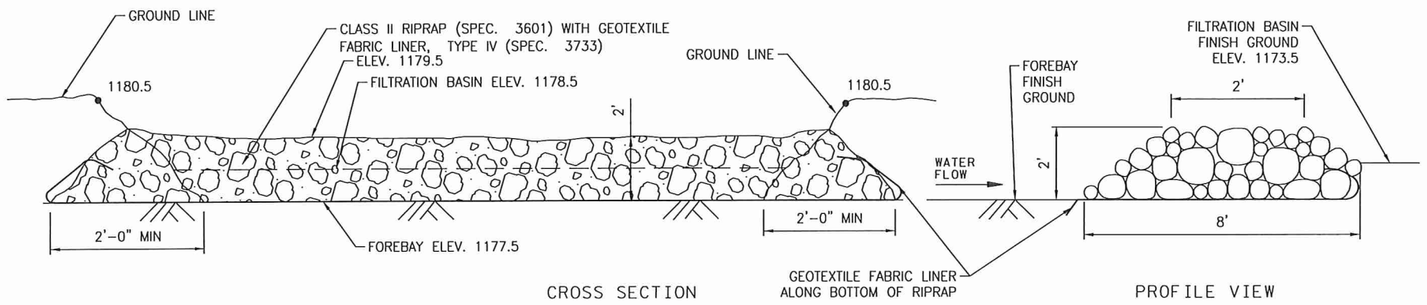


1/7 FILTRATION BASIN TYPICAL CROSS-SECTION
(NOT TO SCALE)

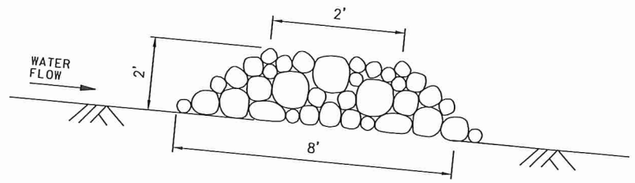
DRAIN TILE COORDINATES				
DRAIN TILE CLEANOUT	DRAIN TILE JUNCTION	NORTHING	EASTING	INVERT ELEVATION
X		150300.65	615402.12	1176.75
X		150266.88	615425.20	1176.75
X		150238.86	615447.74	1176.75
X		150214.86	615483.93	1176.75
	X	150304.55	615459.03	1176.75
	X	150284.59	615477.03	1176.75
	X	150273.02	615487.46	1176.75



DRAIN TILE CLEANOUT



3/7 ROCK WEIR - SECTION
(NOT TO SCALE)



2/7 TEMPORARY ROCK CHECK DAM
(NOT TO SCALE)

NO	DATE	BY	CKD	APPR

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ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA
MISCELLANEOUS DETAILS
WILLOW HILLS POND RENOVATION

SHEET 7 OF 11

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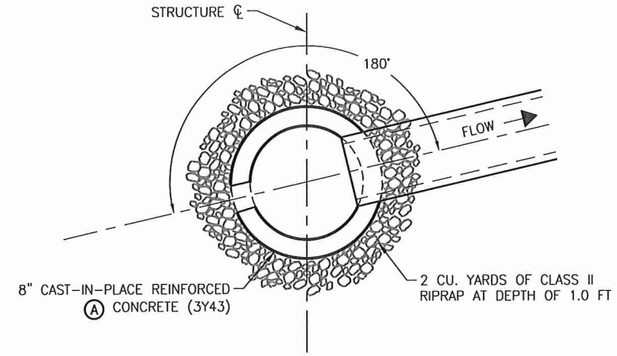

POND OUTLET STRUCTURE PLAN VIEW & RIPRAP DETAIL

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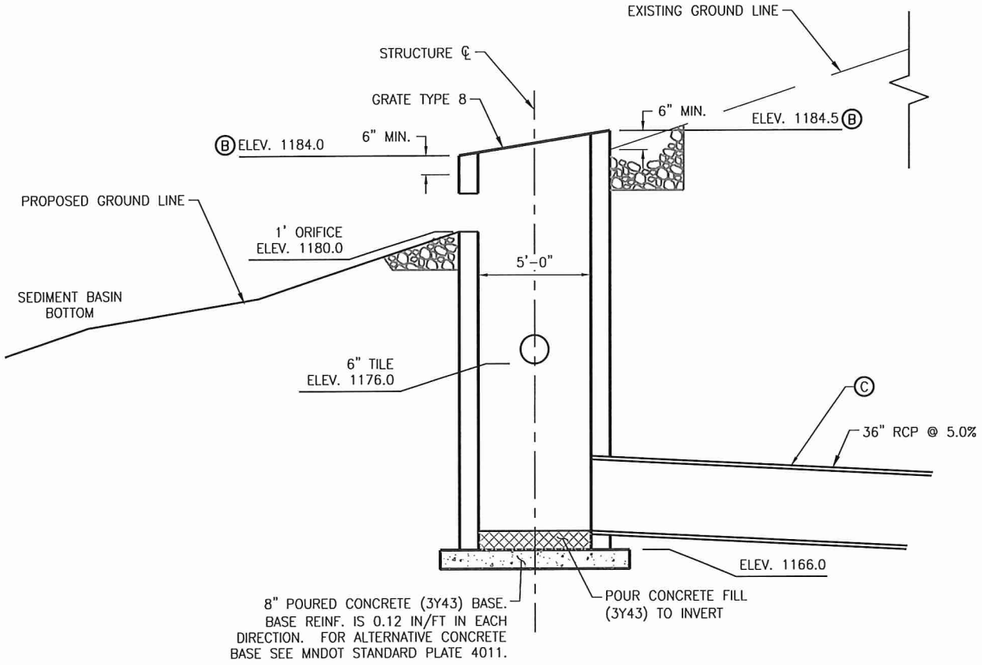


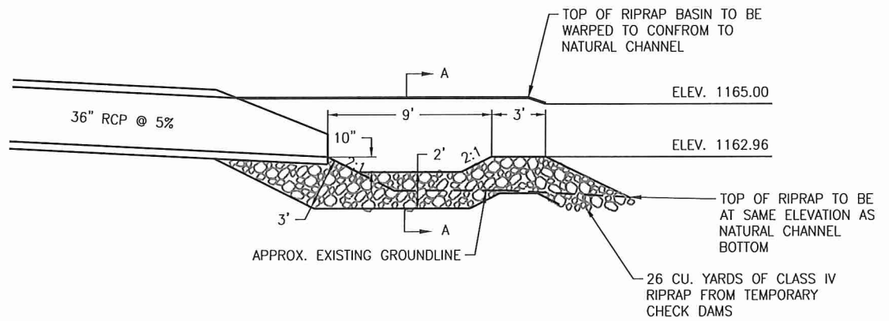
NOTES

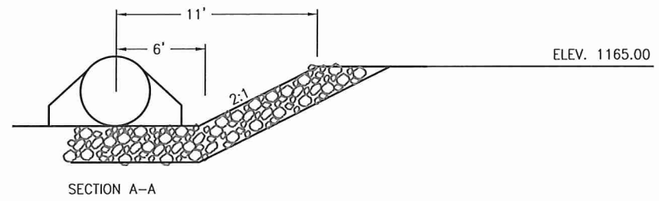
Ⓐ WALL CONSTRUCTION MAY BE CLASS II PRECAST RC PIPE. SEE STANDARD PLATE 3000.

Ⓑ ELEVATION OCCURS DIRECTLY ACROSS STRUCTURE

Ⓒ FILL ANNULAR SPACE WITH CLSM HIGH DENSITY GROUT (SEE SPECIFCATIONS

4/8 OUTLET CONTROL STRUCTURE NO. 103
(NOT TO SCALE)





SECTION A-A

5/8 STILLING BASIN
(NOT TO SCALE)

NO	DATE	BY	CKD	APPR

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Print Name: ERIC ROERISH
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ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA
MISCELLANEOUS DETAILS
WILLOW HILLS POND RENOVATION

SHEET 8 OF 11

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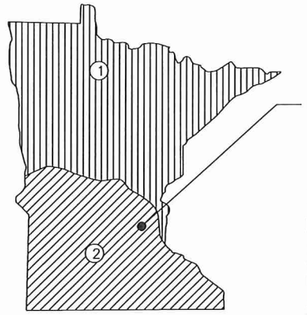
GENERAL NOTES	
SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS.	
REFER TO Mn/DOT SPECIFICATIONS 2571, 3861, THE " INSPECTION AND CONTRACT ADMINISTRATION MANUAL FOR Mn/DOT LANDSCAPE PROJECTS" FOR GENERAL REQUIREMENTS.	
COMPLETE PREPARATORY WORK BEFORE STARTING INITIAL PLANTING OPERATIONS.	
ACCEPT ALL PLANT STOCK IN ACCORDANCE WITH Mn/DOT 3861 PRIOR TO PLANTING.	
THE CONTRACTOR WILL DEMONSTRATE COMPETENCY FOR SOIL CULTIVATION OPERATIONS AS CALLED FOR IN (Mn/DOT2571.3D2 (STEP 4))	
THE CONTRACTOR WILL DEMONSTRATE COMPETENCY FOR ALL PLANT INSTALLATION OPERATIONS AS CALL FOR IN (Mn/DOT2571.3F1a)	
RODENT PROTECTION	SEE SPECIAL PROVISIONS
FERTILIZER	SEE SPECIAL PROVISIONS
COMPOST	Mn/DOT 3890 TYPE 2 UNLESS OTHERWISE SPECIFIED.
MULCH MATERIAL	Mn/DOT 3882 TYPE 6 UNLESS OTHERWISE SPECIFIED.
MASS PLANTING BEDS	PREPARE MASS PLANTING BEDS FOR PLANTS PLACED AT 15'__ OR LESS, UNLESS OTHERWISE SPECIFIED ON SHEETS. PLANT BEDS IN STAGGERED ROWS ON THE PERIMETER FIRST, THEN UNIFORMLY FILL IN WITH REMAINING PLANTS. USE TRIANGULAR SPACING, UNLESS SPECIFIED OTHERWISE. PROVIDE 5' RADIUS CLEAR OF SHRUBS AROUND EACH DECIDUOUS TREE AND 8' CLEAR RADIUS AROUND EACH CONIFER TREE. RADIUS WILL BE MEASURED FROM THE CENTER OF THE TREE TO THE CENTER OF THE SHRUB. NOTIFY ENGINEER OF GROSS PLANT QUANTITY SURPLUS OR DEFICIENCY IMMEDIATELY. MULCH ENTIRE MASS PLANTING BED.
PLANTING PLAN DIMENSIONS	STATED DIMENSIONS SUPERCEDE SCALING FROM PLAN.

WATERING GUIDELINES (Mn/DOT 2571.G)

PLANT TYPE	AVERAGE GALLONS OF WATER PER APPLICATION PER PLANT
MACHINE TRANSPLANTED TREES 42" AND UP	50–100
BALLED & BURLAPPED TREES	20
BARE ROOT TREES	15
BALLED & BURLAPPED SHRUBS	10
BARE ROOT OR CONTAINER SHRUBS	7
WOODY SEEDLINGS	4
PERENNIALS AND VINES	3

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR AND MAINTAIN SOIL MOISTURE AT ADEQUATE BUT NOT EXCESSIVE LEVELS. THE AMOUNTS LISTED ABOVE ARE GUIDELINES, NOT REQUIREMENTS.



● – INDICATES PROJECT LOCATION

1.BARE ROOT PERENNIALS MUST BE INSTALLED IN THE SPRING NO LATER THAN JUNE 1ST OR FOLLOW THE FALL DECIDUOUS PLANTING DATES.

2.ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS, AS DETERMINED BY THE ENGINEER.

3.FALL PLANTING IS NOT ALLOWED FOR BARE ROOT FORM OF THE FOLLOWING SPECIES: HAWTHORN, DOGWOOD, POPLAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUM/CHERRY, OAKS, AND SUMAC.

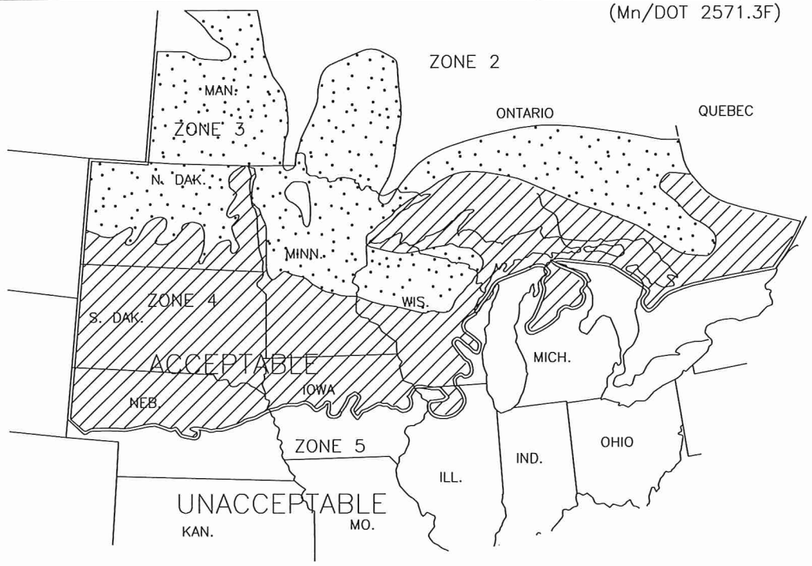
4.ALL REPLACEMENT PLANTS MUST BE INSTALLED DURING THE MONTH OF MAY DURING THE FIRST YEAR OF THE PLANT ESTABLISHMENT PERIOD.

PLANTING DATE BY ZONES

KEY	SPRING				FALL	
	DECIDUOUS	CONIFEROUS	PERENNIALS	SEEDLINGS	DECIDUOUS	CONIFEROUS
①	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	MAY 1 TO JUNE 15	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 16
②	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	MAY 1 TO JUNE 15	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15

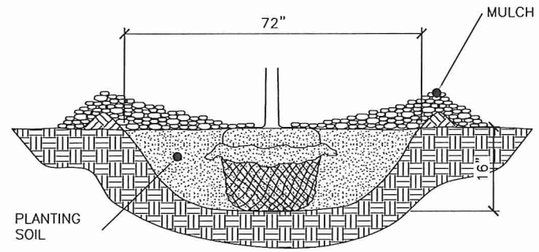
PLANT INSTALLATION PERIOD

(Mn/DOT 2571.3F)



ACCEPTABLE PLANT STOCK GROWING RANGE LIMITS

SOURCE: USDA PLANT HARDINESS ZONE MAP



1.SCARIFY SIDES AND BOTTOM OF HOLE.

2.PROCEED WITH CORRECTIVE PRUNING.

3.SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED PLANTING SOIL. INSTALL PLANT SO THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE WITH BURLAP AND WIRE BASKET, (IF USED), INTACT.

4.SLIT REMAINING TREATED BURLAP AT 6" INTERVALS.

5.BACKFILL TO WITHIN APPROXIMATELY 12" OF THE TOP OF THE ROOTBALL, THEN WATER PLANT. REMOVE THE TOP 1/3 OF THE BASKET OR THE TOP TWO HORIZONTAL RINGS WHICHEVER IS GREATER. REMOVE ALL BURLAP AND NAILS FROM THE TOP 1/3 OF THE BALL. REMOVE ALL TWINE. REMOVE OR CORRECT STEM GIRDLING ROOTS.

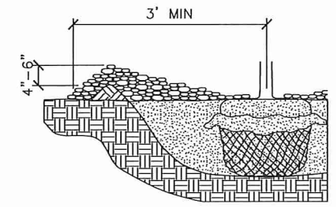
6.PLUMB AND BACKFILL WITH PLANTING SOIL.

7.WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.

8.BACK FILL VOIDS AND WATER SECOND TIME.

9.PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

INSTALLATION OF PLANTS



1.PULL MULCH BACK NO LESS THAN 3" AND NO MORE THAN 6" FROM TREE TRUNKS.

2.SUBSIDING OR DETERIORATING MULCH IS ACCEPTABLE THROUGHOUT THE CONTRACT IF THE MULCH DEPTH IS MAINTAINED AT A MINIMUM 3" DEPTH.

3.IF THE MUCH DEPTH IS LESS THAN 3" ADDITIONAL MULCH IS REQUIRED TO PROVIDE THE MINIMUM DEPTH SPECIFIED IN CHART BELOW.

4.MULCH CONTAMINATED WITH SOIL MUST BE REMOVED AND REPLACED.

MULCH PLACEMENT

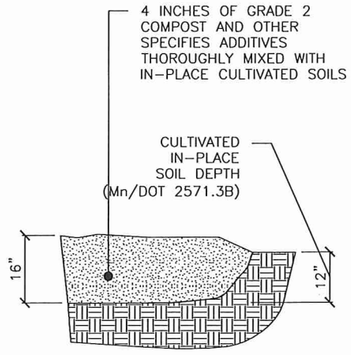
ZONE MAP		
ZONES	LEGEND	APPROXIMATE MIN. TEMP.
2		–40° TO –50° F
3		–30° TO –40° F
4		–20° TO –30° F

FOR ALL PLANT STOCK, DOCUMENT ACCEPTABILITY FOR HARDINESS IN THE MINNESOTA ZONE WHERE THE PROJECT SITE IS LOCATED, AS FOLLOWS:

A. PLANT STOCK CONTINUOUSLY GROWN FOR AT LEAST THE LAST TWO YEARS WITHIN THE ACCEPTABLE LIMITS SHOWN.

OR

B. PLANT STOCK, GROWN OUTSIDE THE ACCEPTABLE GROWING RANGE LIMITS, HAVING THE SEED SOURCE OR ROOT AND GRAFT STOCK ORIGINATING FROM THE ACCEPTABLE LIMITS SHOWN.



PLANTING SOIL

NO	DATE	BY	CKD	APPR

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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: ERIC ROERISH
Date 6/19/15 License # 45645

DRAWN BY S. HARDING
DESIGNED BY L. BREU
CHECKED BY E. ROERISH
COMM. NO.8198

SRF Consulting Group, Inc. — ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA
LANDSCAPING DETAILS
WILLOW HILLS POND RENOVATION

SHEET 9 OF 11

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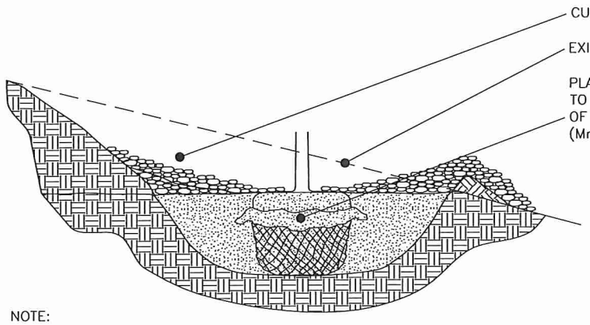
H:\Projects\8198\CAD_BIM\Plan\30 scale 11x17\8198_ln01.dwgLANDSCAPE DETAILS



NOTE:

1.ON 1:2 SLOPES OR GREATER, DO NOT CONSTRUCT THE UPHILL HALF OF THE WATERING BASIN.

2.ON 1:2 SLOPES OR GREATER, DO NOT CONSTRUCT WATERING BASIN.

PLANTING ON STEEP SLOPES

TREE WRAPPING REQUIRED PER 2571, PLANT INSTALLATION.

TREE WRAPPING

1.FORM A DOUBLE-LAYERED CYLINDER USING 0.25" GRID GALVANIZED WELDED WIRE MESH (HARDWARE CLOTH). OVERLAP THE CUT END 2".

2.DRIVE TWO 1" x 1" OPPOSING HEARTWOOD WHITE OAK STAKES INTO THE GROUND 7" FROM THE CENTER OF THE TREE STEM.

3.SECURE THE MESH CYLINDER TO THE OUTSIDE OF THE STAKES USING EITHER, SCREWS AND WASHERS OR RATCHET-LOCKING TIES ALONG THE OVERLAP. SPACE APPROXIMATELY 4" ON CENTER ALONG THE OVERLAP.

a.SCREWS SHALL BE ROUND HEAD GALVANIZED 1/8" DIA. x 3/4" LONG WITH WASHERS.

OR

b.RATCHET-LOCK TIES SHALL BE NYLON AND AT LEAST 8" LONG.

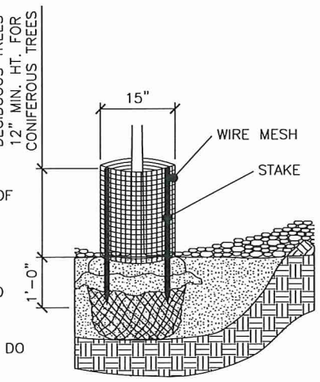
4.EMBED THE LOWER EDGE OF THE MESH CYLINDER 1" BELOW THE SOIL SURFACE WITHOUT DISTURBING THE TREE ROOTS.

5.CUT EDGES WILL NOT BE PERMITTED AT THE TOP OF THE CYLINDER. STAKE WILL BE FLUSH WITH THE TOP OF THE CYLINDER.

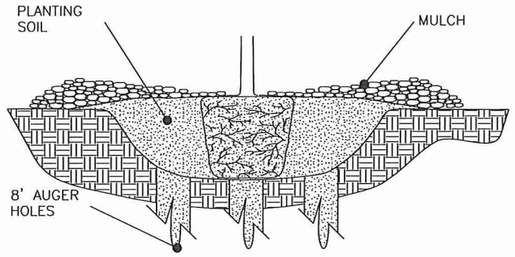
6.MULCH WITHIN THE CYLINDER SHALL NOT EXCEED 3" DEPTH AND SHALL BE PULLED BACK FROM THE TRUNK AS SPECIFIED IN MULCH PLACEMENT DETAIL.

7.THE BOTTOM WHORL OF PINE BRANCHES MAY HAVE TO BE REMOVED TO PERMIT INSTALLATION OF 12" MIN. HEIGHT RODENT GUARDS.

8.INSTALL ON ALL DECIDUOUS, PINE AND LARCH TREES, DO NOT INSTALL ON SPRUCE TREES.



RODENT PROTECTION



INSTALL GRANULAR FILTER

1.EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.

2.AUGER 8" DIAMETER HOLES ENTIRELY THROUGH IMPERVIOUS OR POORLY DRAINED HARD PAN SOIL LAYER TO ADEQUATELY DRAIN SUBSOIL.

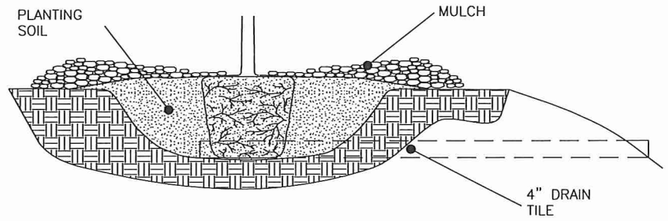
3.TEST FOR POSITIVE DRAINAGE. RE-AUGER AN ADDITIONAL 8" IF NECESSARY FOR POSITIVE DRAINAGE.

4.THOUROUGHLY BACKFILL AUGER HOLES WITH A UNIFORM INCORPORATED MIXTURE OF 50% SAND AND 50% INPLACE SOIL.

5.COMPLETE PLANTING ACCORDING TO INSTALLATION OF PLANTS (Mn/DOT2571.3F).

NOTE:

1.THE NEED FOR USING PLANTING DETAILS FOR POORLY DRAINED SOILS AND WHICH TYPE TO USE ARE DETERMINED BY THE CONTRACTOR, SUBJECT TO ENGINEER APPROVAL.

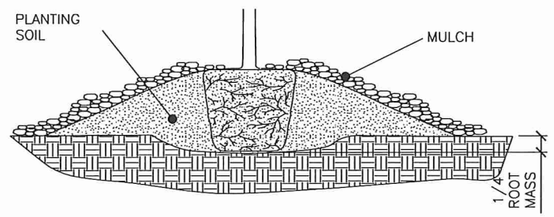


INSTALL TILE DRAINAGE

1.EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF THE ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.

2.INSTALL 4" MINIMUM DIAMETER DRAIN TILE DAYLIGHTING AT A LOWER GRADE.

3.COMPLETE PLANTING ACCORDING TO INSTALLATION OF PLANTS (Mn/DOT2571.3F).



INSTALL MINI-BERM

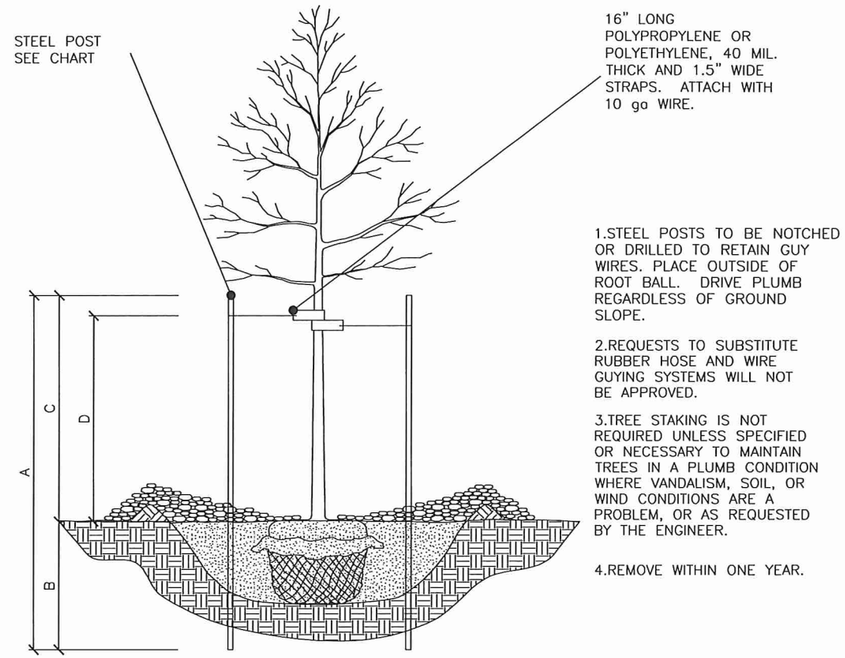
1.EXCAVATE HOLE OR BED 1/4 THE DEPTH OF THE ROOT MASS.

2.SET ROOT MASS IN HOLE.

3.CONSTRUCT BERM WITH SANDY LOAM TOPSOIL. EXTEND THE BERM BASE TO A WIDTH OF 3 TIMES THE BERM HEIGHT.

4.COMPLETE PLANTING ACCORDING TO INSTALLATION OF PLANTS (Mn/DOT2571.3F).

PLANTING DETAIL FOR POORLY DRAINED SOILS



1.STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF ROOT BALL. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.

2.REQUESTS TO SUBSTITUTE RUBBER HOSE AND WIRE GUYING SYSTEMS WILL NOT BE APPROVED.

3.TREE STAKING IS NOT REQUIRED UNLESS SPECIFIED OR NECESSARY TO MAINTAIN TREES IN A PLUMB CONDITION WHERE VANDALISM, SOIL, OR WIND CONDITIONS ARE A PROBLEM, OR AS REQUESTED BY THE ENGINEER.

4.REMOVE WITHIN ONE YEAR.

STEEL POST SIZING					
CALIPER	STEEL POST TYPE	A	B	C	D
LESS THEN 4 INCHES	ROLLED STEEL FENCE POST (Mn/DOT 3403) OR APPROVED EQUAL.	7'-0"	3'-0" MIN.	4'-0"	3'-0"
GREATER THEN 4 INCHES	10', 2.2 LB. FLANGED CHANNEL STEEL SIGN POST (Mn/DOT 3401) OR APPROVED EQUAL.	10'-0"	4'-0" MIN.	6'-0"	5'-0"

STAKING AND GUYING

NO	DATE	BY	CKD	APPR

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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: ERIC ROERISH

Date 6/19/15 License # 45645

DRAWN BY S. HARDING
DESIGNED BY L. BREU
CHECKED BY E. ROERISH
COMM. NO.8198

SRF Consulting Group, Inc.

ENGINEERS PLANNERS DESIGNERS

CITY OF ROCHESTER, MINNESOTA

LANDSCAPING DETAILS

WILLOW HILLS POND RENOVATION

SHEET 10 OF 11

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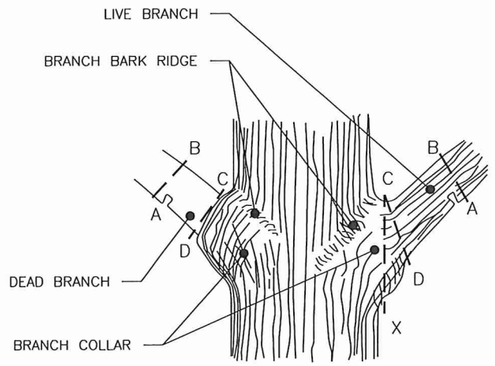


BRANCHES PRUNED AT TRUNK (SHIGO METHOD)

INCORRECT CUT (TOO CLOSE) WILL RESULT IN DISCONTINUOUS CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

CORRECT CUT (LEAVING BRANCH COLLAR BUT NO STUB) WILL RESULT IN CONTINUOUS DOUGHNUT SHAPED CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

STEPS TO PRUNING WITH PRUNING SAW

1.CUT PART WAY THROUGH THE BRANCH AT POINT A.

2.CUT COMPLETELY THROUGH BRANCH FROM POINT B TO A.

3.CUT FROM POINT C TO D.

4.LEAVE BRANCH COLLAR (C TO D)

5.DO NOT FLUSH CUT (C TO X)

6.DO NOT LEAVE STUBS (B TO A)

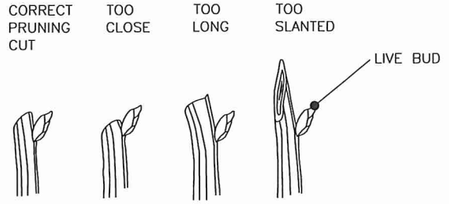
PRUNING NOTES

1.PRUNE USING CLEAN AND SHARP SCISSOR TYPE PRUNER OR PRUNING SAW.

2.THE BEST TIME TO PRUNE IS LATE DORMANT SEASON OR EARLY SPRING.

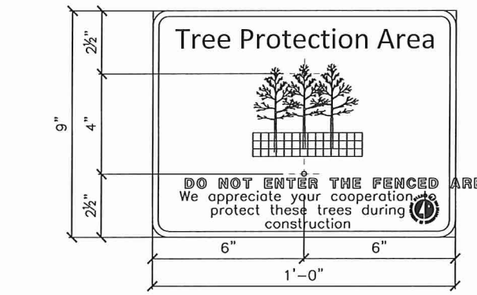
3.AVOID PRUNING OAKS IN APRIL, MAY, JUNE OR JULY.

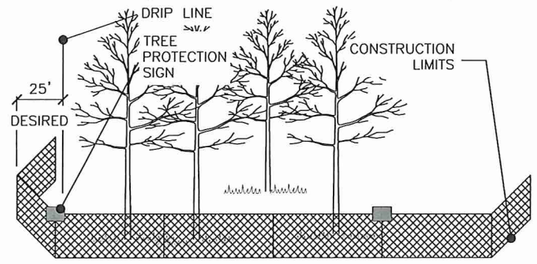
4.IF PRUNING IS NECESSARY OR IF WOUNDS OCCUR TO OAK TREES IN APRIL, MAY, JUNE OR JULY, IMMEDIATELY PAINT CUT SURFACE OR WOUND WITH LATEX PAINT OR SHELLAC.



BRANCHES PRUNED TO LIVE BUD

1.FABRICATE 12" X 9" X 3/8" SIGN WITH 0.75" RADIUS CORNERS.
2.SIGN SHALL BE WHITE WITH BLACK LETTERING.
3.ATTACH SIGN TO POST USING 1" LENGTH WOOD SCREWS.

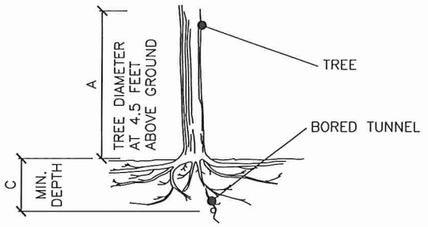


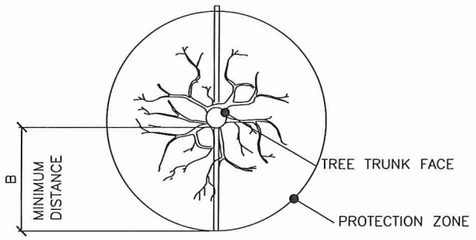


1.FURNISH AND INSTALL TEMPORARY FENCE AT THE TREE'S DRIPLINE OR CONSTRUCTION LIMITS AS SPECIFIED, PRIOR TO ANY CONSTRUCTION.

2.WHEN POSSIBLE PLACE FENCE 25 FEET BEYOND THE DRIP LINE.

3.PLACE TREE PROTECTION SIGNS ALONG FENCE AT 50' INTERVALS.





TREE PROTECTION ZONE		
A	B	C
TREE DIAMETER AT 4.5' ABOVE GROUND	MINIMUM DISTANCE FROM FACE OF TREE TRUNK	MINIMUM DEPTH OF TUNNEL
0"–2"	2'	2'
3"–4"	4'	2.5'
5"–9"	6'	2.5'
10"–14"	10'	3'
15"–19"	12'	3.25'
19" +	15'	4'

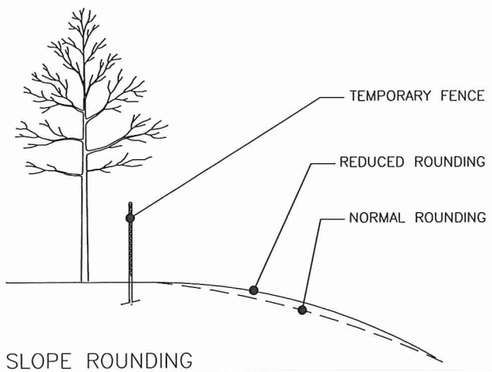
PRUNING

SIGNIFICANT TREES NEAR THE PROPOSED CONSTRUCTION LIMITS WILL BE IDENTIFIED IN THE PLAN OR BY THE ENGINEER AND WILL BE PRESERVED BY THE CONTRACTOR.

1.PLACE THE TEMPORARY FENCE.

2.REDUCE SLOPE ROUNDING WHERE ROOT ZONES ARE DISTURBED BY NORMAL SLOPE ROUNDING.

3.VARY BACK SLOPE STEEPNESS TO AVOID TREE LOSS OR UNNECESSARY ROOT DAMAGE.



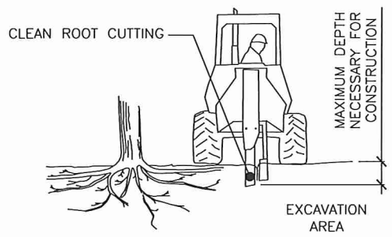
SLOPE ROUNDING

TEMPORARY FENCE

1.WHEN DESIGNATED IN THE PLAN OR DIRECTED BY THE ENGINEER, PRIOR TO EXCAVATION, ALL TREE ROOTS WILL BE CLEANLY CUT BY A VIBRATORY PLOW OR OTHER APPROVED ROOT CUTTER.

2.THE TREE ROOTS WILL BE CUT CLEANLY TO THE MAXIMUM DEPTH NECESSARY FOR CONSTRUCTION.

3.ROOT ENDS EXPOSED BY EXCAVATION ACTIVITIES SHALL BE IMMEDIATELY COVERED WITH A 6" LAYER OF ADJACENT SOIL.



CLEAN ROOT CUTTING

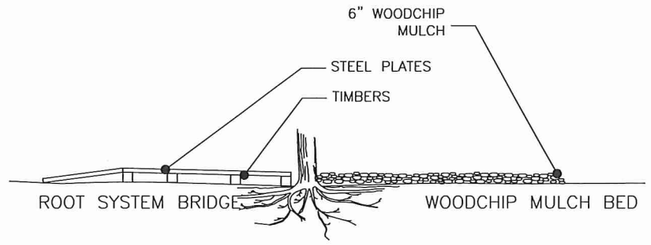
UTILITY CONSTRUCTION

IF CONSTRUCTION VEHICLES MUST PASS OVER ROOT ZONES, THE CONTRACTOR MUST EITHER:

1.CONSTRUCT ROOT SYSTEM BRIDGES WITH STEEL PLATE SUPPORTED ON WOOD TIMBERS PLACED RADIALLY TO THE TREE TRUNK.

OR

2.PLACE A 6 INCH LAYER OF WOODCHIP MULCH OVER A GEOTEXTILE (3733) (PERMEABLE FABRIC) TYPE III.



OTHER VEGETATION PROTECTION MEASURES

NO	DATE	BY	CKD	APPR

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